ISRCTN99322160 https://doi.org/10.1186/ISRCTN99322160

Does ecabet sodium prevent low-dose aspirin-induced small intestinal mucosal injury?

Submission date
01/09/2018

Recruitment status
No longer recruiting

Registration date
01/10/2018

Overall study status
Completed

Last Edited
10/01/2019

Condition category
Injury, Occupational Diseases, Poisoning

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Low doses of aspirin (LDA) are widely known to have blood clotting effects. However, aspirin does through through suppressing production of molecules called prostaglandins. The reduction in prostaglandins can lead to injury of the intestinal mucosa. Therefore, it is recommended that LDA users also use another type of drug called a proton pump inhibitor (PPI), which can help to prevent this mucosal injury in the upper gastrointestinal tract. PPIs inhibit secretion of stomach acid. However, the inhibition of stomach acid secretion does not prevent mucosal injuries in the small intestine as a result of LDA use. A strategy to prevent LDA-induced injuries in the small intestine has not yet been established. This study aims to investigate whether high doses of ecabet sodium (ES) can be used to prevent LDA-induced small intestinal mucosal injuries.

Who can participate?
Healthy adults aged 20-65

What does the study involve?
Participants will be randomly allocated to group A or group B. Group A will receive 100 mg of LDA to take once daily, whereas group B will receive 100 mg of LDA (once daily) and 4 g of ES (1 g taken 4 times daily). Both groups will be asked to take these for a 2 week period. Participants will undergo small bowel capsule endoscopy (SBCE) before beginning to take the study drugs and after taking the drugs for 2 weeks.

What are the possible benefits and risks of participating?
There are no known benefits to participants taking part in this study. The possible risks of taking part in this study include adverse events associated with administration of LDA or ES, and retaining the capsule endoscope in the body.

Where is the study run from?
Osaka Medical College Hospital (Japan)

When is the study starting and how long is it expected to run for?
December 2009 to March 2012

Who is funding the study?
Second Department of Internal Medicine, Osaka Medical College (Japan)

Who is the main contact?
Kazuhiro Ota
clash_kaz@yahoo.co.jp

Contact information

Type(s)
Public

Contact name
Dr Kazuhiro Ota

ORCID ID
http://orcid.org/0000-0002-5628-9662

Contact details
2-7, Daigaku-machi
Takatsuki
Japan
569-8686

Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
UMIN000033984

Study information

Scientific Title
Preventive effect of ecabet sodium on low-dose aspirin-induced small intestinal mucosal injury: a randomised, double-blind, pilot study

Study objectives
Ecabet sodium (ES), a gastric mucoprotective drug that locally acts as an antiulcer agent, has anti-pepsin activity. ES binds to proteins to form a complex that is resistant to the peptic activity of gastric juice, increasing the capacity of the gastric mucosa to synthesize prostaglandin E2 and/or prostacyclin and enhancing gastric mucosal defensive factors, such as mucosal blood flow, mucosal adherent mucus, and mucosal bicarbonate secretion. As these mechanisms share some features with those of rebamipide, we hypothesized that ES might also prevent small intestinal mucosal injury.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Ethics Review Committee at Osaka Medical College, 18/01/2010, No. 730

Study design
Interventional prospective double-blind pilot randomised controlled trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Hospital

Study type(s)
Treatment

Participant information sheet
No participant information sheet available

Health condition(s) or problem(s) studied
Low-dose aspirin-induced small intestinal mucosal injury

Interventions
Participants were randomly allocated to group A and group B and instructed to take the study drug(s) orally for 2 weeks. A coordinator performed a simple fixed-allocation randomisation using a block-randomization scheme.
Group A received LDA (low-dose aspirin) (100 mg) to take once daily. Group B received LDA to take once daily and 4.0g of ecabet sodium (ES) (1.0 g to be taken 4 times daily, GASTROM® Granules 66.7%, Mitsubishi Tanabe Pharma Corporation, Osaka, Japan). The dosage of LDA for this group was determined on the basis of the dosage recommended for antithrombotic activity in cardiovascular and cerebrovascular diseases. Small bowel capsule endoscopy (SBCE) was performed before and 2 weeks after drug administration.
The total duration of treatment was determined based on previous reports on LDA-induced small intestinal mucosal injury.

Intervention Type
Drug

Phase
Not Applicable

Drug/device/biological/vaccine name(s)
Ecabet sodium Low-dose aspirin

Primary outcome measure

Comparison of the severity of small intestinal mucosal injury between baseline and 2 weeks after aspirin administration in each group. Small intestinal lesions were examined using a PillCamSB (Given Imaging, Ltd, Yoquneam, Israel), an SBCE device specifically designed for assessing the small intestine. The SBCE findings were evaluated to identify spotty redness, patchy redness, erosion, and ulcer. In addition, if bleeding or stenosis was detected, these findings were appended to those related to mucosal injuries. A spotty redness was defined as a point, a patchy redness as a red region with a border extending from the peripheral normal mucosa, an erosion as a defect in the normal villus mucosa, and an ulcer as defects covered with a white coat. Two investigators independently assessed the capsule endoscopic images under blinded conditions. If the observers recorded different findings, they discussed the case until an agreement was reached. This was assessed at the baseline and after 2 weeks.

Secondary outcome measures
Comparison of the severity of small intestinal mucosal injury 2 weeks after aspirin administration between group A and group B, assessed as per primary outcome measure.

Overall study start date
11/12/2009

Completion date
31/03/2012

Eligibility

Key inclusion criteria
1. Healthy adults
2. Aged 20-65
3. Provided informed consent based on full understanding of the study protocol
4. No history of medication use during the month before enrolment in the study

Participant type(s)
Healthy volunteer

Age group
Adult

Sex
Both

Target number of participants
30

Key exclusion criteria
1. History of peptic ulcers or gastrointestinal bleeding
2. Significant hepatic, renal, heart or respiratory diseases
3. History of gastrointestinal surgery other than appendectomy
4. Use of any of the following within 2 weeks prior to the study:
4.1. Oral histamine H2-receptor antagonists
4.2. Gastrointestinal kinetic agents
4.3. Gastric mucoprotective drugs

5. Use of any of the following within 4 weeks prior to the study:
5.1. Oral non-steroidal anti-inflammatory drugs (NSAIDs)
5.2. Steroids
5.3. Anticholinergic drugs
5.4. Anticancer drugs
5.5. Antithrombotic drugs
6. Alcohol or chemical dependency
7. History of gastrointestinal obstruction
8. Refusal to consent to surgery that would be required if the capsule endoscope was retained in the body
9. Determination by the investigator, at his/her discretion, that the participant is ineligible for participation in the study for any reason

Date of first enrolment
04/10/2011

Date of final enrolment
28/12/2011

Locations

Countries of recruitment
Japan

Study participating centre
Osaka Medical College
2-7, Daigaku-machi
Takatsuki
Japan
569-8686

Sponsor information

Organisation
Osaka medical college

Sponsor details
2-7, Daigaku-machi
Takatsuki
Japan
569-8686

Sponsor type
University/education

ROR

https://ror.org/01y2kdt21

Funder(s)

Funder type
Not defined

Funder Name
Investigator initiated and funded

Results and Publications

Publication and dissemination plan
Planned publication in a high impact, peer-reviewed journal

Intention to publish date
31/03/2013

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are/will be available upon request from clash_kaz@yahoo.co.jp

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	08/01/2019	10/01/2019	Yes	No